

references. Furthermore, claim 1 is objected to regarding an antecedent basis issue and claim 4 is objected to for not being in proper dependency format. As a result, claims 1 and 4 have been amended without the introduction of new subject matter.

Claim 4 has been rewritten in independent form to recite a product-by-process type claim in a more traditional format.

Claims 1, 3 -5 stand rejected under 35 USC §103 as unpatentable over Sato et al. in view of Luvini et al. The Examiner asserts that Sato et al. disclose substantially all the features recited in the claims except for the card being a "mini-card". The Examiner contends that Luvini et al. disclose this "mini-card" and that one of ordinary skill would have either a) found it obvious to combine the references or b) found it obvious to extend the teachings of Sato et al. to include "mini-cards".

Claim 1 recites providing an array of substrates including a plurality of individual substrates. In direct contrast, Sato et al. disclose a single, homogeneous substrate that has multiple chips mounted at regular intervals. Sato et al. do not disclose or suggest a plurality of individual substrates that are connected, as recited in claim 1. Luvini et al. also do not disclose an array of connected individual substrates, as recited in claim 1. Claims 1 and 4 have been amended to more clearly recite that the step of dividing the substrate array occurs after the step of covering the individual substrates is completed. In direct contrast, Sato et al., Luvini et al. and Masahiko each disclose a method which requires covering being performed after dividing. Thus, the combination of Sato et al. and Luvini et al. does not disclose nor suggest each and every feature recited in claim 1 and, therefore, does not provide the requisite basis for establishing a prima facie case of

obviousness under 35 USC §103. Accordingly, Applicant requests reconsideration and withdrawal of the rejection under 35 USC §103 of claim 1 and dependent claims 2 - 4.

Claim 5 has been amended to more clearly recite that the case covers the substrate and exposes a part of the substrate through an external side of the case. Applicant urges that the combination of Sato et al. and Luvini et al. does not disclose or suggest these recited claim features and requests reconsideration and withdrawal of the rejection under 35 USC §103 of claim 5.

Claim 2 stands rejected under 35 USC §103 as unpatentable over Sato et al. in view of Masahiko. The Examiner asserts that Sato et al. disclose the invention substantially as recited in claim 2 except for the top and bottom sandwich segments. The Examiner contends that Masahiko discloses these segments and concludes that one of ordinary skill would have found it obvious to combine the teachings of the two references in order to protect the embedded chip.

Applicant would like to initially stress that, as described above, that the combination of Sato et al. and Masahiko does not disclose or suggest every feature recited in claim 1 and, thus, does not disclose or suggest every feature recited in dependent claim 2. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 USC §103 of claim 2.

In addition, Applicant stresses that the requisite motivation to support the ultimate legal conclusion of obvious under 35 U.S.C. §103 is not an abstract concept, but must stem from the applied prior art as a whole and have realistically impelled one having ordinary skill in the art to modify a specific reference in a specific manner to arrive at a specifically claimed invention. **In re Newell**, 891 F.2d 899, 13 USPQ2d 1248 (Fed. Cir.

1989). A generalization is legally insufficient to establish the requisite motivation to modify a specific reference in a specific manner to arrive at a specifically claimed invention. **In re Deuel**, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995). Again, the requisite motivation must have been generated by real world considerations. **Panduit Corp. v. Dennison Mfg. Co.**, *supra*.

In applying the above legal tenets to the exigencies of this case, Applicant submits that a prima facie basis to deny patentability to the claimed invention of claim 2 under 35 U.S.C. §103 has not been established for lack of the requisite motivation. In particular, Sato et al. describe a module (see FIG. 5b) that includes pads **12** for external electrical connectivity. While these pads **12** may not be visible in all the illustrations of Sato et al., the pads are still part of the types of semiconductor modules for which Sato et al. merely disclose an improved adhesive applying and mounting method. If the substrates of the semiconductor modules of Sato et al. were hypothetically encased, as suggested by the Examiner, in the top and bottom segments of Masahiko, then the pads **12** of the module would be covered and prevent the electrical contact that the pads **12** were designed to provide. Applicant urges, therefore, that one of ordinary skill would not have been motivated to modify the semiconductor modules of Sato et al. in such a manner as to make the pads **12** inoperable. Thus, one of ordinary skill would not have been motivated to combine the teachings of Masahiko regarding top and bottom segments with the semiconductor modules of Sato et al. in an attempt to arrive at the invention recited in claim 2. Without the requisite motivation, a prima facie case of obviousness under 35 USC §103 cannot be established and Applicant, therefore, respectfully requests reconsideration and withdrawal of the rejection under 35 USC §103 of claim 2.

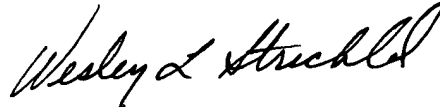
SUMMARY

In view of the above remarks and amendments, Applicant believes claims 1-5 are in condition for allowance and passage of this case to issue is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY

A handwritten signature in black ink, appearing to read "Wesley L. Strickland". The signature is fluid and cursive, with the first name "Wesley" and last name "Strickland" clearly distinguishable.

Wesley L. Strickland  
Registration No. 44,363

600 13<sup>th</sup> Street, N.W.  
Washington, DC 20005-3096  
(202) 756-8000 WLS:cac  
**Date: February 26, 2002**  
Facsimile: (202) 756-8087

MARKED-UP VERSION OF AMENDED CLAIMS:

1. (Amended) A method of manufacturing a mini-card with a semiconductor memory device comprising the steps of:

providing an array of substrates including a plurality of individual substrates connected together;

mounting a semiconductor memory device on each of the individual substrates;

covering the individual substrates with respective cases; and

dividing, after the step of covering is completed, the substrate array to provide encased individual substrates each completing [a] the mini-card having the semiconductor memory device embedded therein.

4. (Amended) A mini-card with a semiconductor memory device is characterized in that the mini-card is manufactured by [the] a method [of according to claim 1] comprising the steps:

providing an array of substrates including a plurality of individual substrates connected together;

mounting a semiconductor memory device on each of the individual substrates;

covering the individual substrates with respective cases; and

dividing, after the step of covering is completed, the substrate array to provide encased individual substrates each completing the mini-card having the semiconductor memory device embedded therein.

5. (Amended) A mini-card with a semiconductor memory device comprising:  
a substrate; [and]  
a semiconductor memory device mounted on the substrate [covered with a case]; and  
a case covering the substrate;  
wherein a part of the substrate is [partially] exposed [outwardly] to an external  
side of the case.